Bertold Hock, Erich F. Elstner (Eds.), Plant Toxicology, Fourth edition, Taylor and Francis Group, P O Box 6329, Basingstoke, RG24 8DR, United Kingdom, 2005, IISBN 0824753232; e-mail international.tandf@thomsonpublishingservices.co.uk, Web: www.tandf.co.uk, Hardback, 648 pages, £74.99

The word "toxicology" comes from the Greek word *toxicon*, a poisonous substance into which arrowheads were dipped, and the suffix *-logy* from the Greek word *logos*, which means the study of, or treatise. Toxicology is the study of poisons around us and most often scientific disciplines describe how such (environmental) toxins affect animals and humans. However, not only humans and animals, but also plants can be affected by a multitude of toxins. Surprisingly, despite the ecological impact and impact on, e.g., food production, little attention is usually paid to plant toxicology.

This book has the merit to fill in this gap by describing the toxicokinetic and toxicodynamic processes that connect exposure of plants to a toxicant to the resulting toxicity. It indeed describes in 11 comprehensive chapters the exposure, uptake, distribution, biotransformation and elimination of toxins by plants. It considers the multitude of toxins affecting plant health, including, among others, many air pollutants, mineral trace elements, herbicides, fungal-, bacterial- and viral pathogens.

The book furthermore starts with an introductory chapter on plant characteristics including their functional cellular organization, tissues and organs, plant reproduction and development, and hence it provides basic biological knowledge that is necessary to fully understand and appreciate how plants can be affected by, or defend themselves against, the many toxins they are exposed to. Basics of biological knowledge are also provided in other chapters when needed.

Well illustrated and comprehensively written it is of a high scientific level making it an important tool for scientists from many different disciplines, including botanists, ecologists, toxicologists, agronomists, etc. It is however probably of a too high scientific level and complexity to be fully appreciated by the layman.

Luc Verschaeve
Vito, Environmental Toxicology, Boeretang 200, B-2400 Mol, Belgium
E-mail address: luc.verschaeve@vito.be.

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John Burrows, Christopher Willis (Eds.), Plants of the Nyika Plateau: An Account of the Vegetation of the Nyika National Parks of Malawi and Zambia, Southern African Botanical Diversity Network Report, vol. 31, 2005, ISBN: 1-919976-08-6, mapheza@sanbi.org, Price R150,00 (or US $40), Soft cover, 405 pages

This is one of the latest of a series of publications, the product of the SABONET Programme, and one of the best so far. Profusely illustrated with photographs, both in colour and in black-and-white, line drawings by several artists, maps, and satellite images, it is a valuable and handsome addition to the natural history of an area which deserves to be better known.

The major contributors to the work are the husband-and-wife team who have already given us two magnificent books on Southern African botany, one on the ferns, and the second on the Moraceae. Here again John Burrows has done most of the text, while Sandie has contributed hundreds of her exquisite ink drawings. They are backed up by a strong team of taxonomists and artists.

Regional floras are no longer in fashion, and our own Flora Zambesiaca has been threatened with closure many times. It seems unlikely that Cyperaceae will ever see the light of day. Priority these days is given to global revisions. As coverage in herbarium collections fills in the gaps between widely spaced localities, it makes sense to revise globally to avoid frequent name changes which are the inevitable result of piecemeal regional revisions.

The downside of global revisions is that the journals in which the revisions are published cannot be afforded by poorly funded institutions in developing countries. Zambian herbaria may have more or less complete sets of Flora Zambesiaca, but little else. The national and special areas checklists, which SABONET is publishing, go a long way to compensate for this lack of basic source material in taxonomy.

The introductory section reviews the geography, ecology, and the vegetation communities. The international border between Zambia and Malawi follows the watershed. Over geological time the headwater advance of drainages may be expected to be more active on the windward side, than on the drier lee side, which explains perhaps why only 4% of the plateau is on the Zambian side. The map on the inside front cover shows Malawi and the Malawian Nyika. The Zambian Nyika is apparently featureless! The Chire River at least could have been shown, since two of the major forests, Chowo and Manyenjere, occupy its valley slopes.

Nyika and its two close neighbours, the Mafingas and Makutu, comprise Zambia's only significant montane areas. These are all a long 2-day drive from Lusaka and the Copperbelt towns. The only access to the Zambian Nyika is through Malawi. Inevitably this causes major management problems in a country where one of its nine provinces is the size of Malawi. The good news is that the long running stand-off between a tour operator and the Zambian Wildlife Authority is over, and the Nyika is set to be restored as a major destination in Zambian tour circuits.

A chapter on the history of botanic exploration, with short biographical notes, many accompanied by portrait photographs, is particularly welcome. The note on Edward Robinson, one of Zambia's greatest collectors, describes him as a teacher in Southern Rhodesia (Zimbabwe). Although my appreciation of Edward Robinson in *Kirkia* Vol. 18(1) is listed in the references, apparently the authors had not read it. Edward Robinson was a teacher during his stay in Africa, but he was neither in (Southern) Rhodesia nor Zimbabwe. Apart

from anything else, he collected and described 14 new species of the sedge *Scleria*, mostly collected by himself, and renamed another. Since the holotype of *S. richardsiae* is from the Nyika, the paper in which it is described should have been listed in the references. (E.A. Robinson, 1962–1963, *Scleria* in Central Africa: Descriptions and Notes: II. *Kirkia* Vol. 3, 8–14.)

Those of us with no access to a good library will appreciate the more than 5 pages of references. An important omission is Dennys Fanshawe's *Vegetation of the Nyika Plateau*, Research Pamphlet No. 35, Division of Forest Research, Kitwe (1971?). Fanshawe lists the components of montane and submontane forest, but without citations. Inclusions such as *Pancovia golungensis* may be based on misidentification, but there are probably specimens collected by Fanshawe at FHO and NDO. Another omission from the references is W.H.J. Rangeley's *Ancient iron workings on the Nyika Plateau*, Nyasaland Journal Vol. 6, 45–52 (quoted by Fanshawe).

The glossary is exceptionally comprehensive, and will be much appreciated.

There are remarkably few errors, including typos. *Memecylon* is spelt *Memycylon* more than once. The trifoliolate leaf of *Rhus longipes* is described as trifoliate; this usage is recognised in the glossary, and has been so often misapplied that its use may be forgiven. The name 'suffrutex herb', for one of the life forms, is an oxymoron. The term suffrutex, which translates to sub-shrub, is applied differently by various authors, but whatever else it might be, it must be a shrub. It is unfortunate that *Stathmostelma fornicatum* is illustrated with a drawing of *Strombosia scheffleri*. *Rhus longipes* is shown to have a toothed terminal leaflet; maybe it was drawn from a specimen of *Allophylus*, an easy mistake to make.

The high standard of accuracy breaks down in the caesalp woodland dominants. *Brachystegia spiciformis* and *Julbernardia globiflora* are both wrongly shown to have symmetrical leaflet bases, and both have distinct petiolules. These are key characters. *B. spiciformis* is shown to have acuminate leaflets. The leaflet pairs of *Cryptosepalum maraviense* are spaced, whereas the text correctly describes them as overlapping.

The choice of illustrated species is inevitably determined by availability of suitable material. Illustrations are mostly of common and widespread species, such as *Ageratum conyzoides*, rather than of species more typical of the Nyika. I would be inclined to give widespread species a mere mention. I would have appreciated more than one illustration of the very important, but much neglected genus, *Scleria*, which typifies many undisturbed swamp habitats, especially since the species illustrated is an atypical dryland species.

I find it sad that many floras now order the families alphabetically. Imagine a field guide to birds which starts with Akalats followed by Albatrosses; where Crows come between Crombecs and Cuckoos, and where Finches follow Falcons. This is no better than stamp collecting. In fact, it is only for the convenience of those who already know the families, and how many of us have kept abreast with all the reshuffles to which the angiosperms have been subjected in recent years? Anyone else has to go to the index, so why not group the three leguminous families together? To this nature freak one of the most exciting aspects of biology is the unravelling of phylogenetic relationships. Jumbling the families for the benefit of the few who don't need to use the index deprives the rest of us of an opportunity to learn more about relationships. Brief family and genus descriptions would have enhanced the value of the book.

What the sub-region now needs is a database of line drawings and photographs of all species and subspecies. SABONET has already made a good start in this direction. The net should be caste wide to take advantage of available expertise. Distribution maps could also be provided. From this database, material could be extracted to compile national or area checklists, which could be published cheaply.

I thank Trevor Edwards for inviting me to write this review.

M. Bingham
Lusaka
E-mail address: mbingham@zamnet.zm.

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Kurt, Weising, Hilde, Nybom, Kirsten, Wolff, Günther, Kahl, DNA Fingerprinting in Plants—Principles, Methods, and Applications, CRC Press Taylor and Francis Group Boca Raton, London, New York, Singapore, 6000 Broken Sound Parkway, NW Boca Raton, FL 33487-2742, USA, Second edition includes bibliographical references and index, 1-444 pages £56.99. ISBN 0 8493 1488 7, www.taylorandfrancis.com

It is always an ensured success to write a manual for new technologies, and this book is a perfect example. The exponential development of molecular techniques and their rapid introduction on a large scale requires specialists at all levels. This book is written for a wide spectrum of people: technicians, graduate students and active researchers, right up to university lecturers. This revised, second edition, besides being completely rewritten since the first edition (which mainly focused on PCR based technologies), contains an extensive literature survey, citing almost all important references. It also includes selected and important resources in websites. The first Chapter gives an excellent overview on the biology of microsatellites, minisatellites and on transposable elements.

The Chapter on the methodology of plant DNA isolation provides very useful ideas for those who need to purify their genetic material. This Chapter helps to assess the best methods of purification for different experimental purposes. As DNA fingerprinting is one of the most important technologies for the genomic study of plants, the critical evaluation of the key papers in this area is of utmost importance.

The book's last Chapter deals with future prospects, including a very brief introduction of SNiPi and Chips for DNA and RNA profiling. This Chapter is very general compared to the other important parts of the book, and touches only the tip of the iceberg concerning DNA Chip technology, micro and macro arrays which are already in the mainstream literature of plant genomics and can be found in different